"Manin’s conjecture for certain Châtelet surfaces"

For a projective variety $S$ which contains infinitely many rational points, a natural question is to count the number of such points of height less than some bound $B$. The Manin-Peyre’s conjectures predict, for Fano varieties, the distribution of rational points of bounded height in terms of geometric invariants of the variety. Following the line of attack of La Bretêche, Browning and Peyre, we will prove in this talk Manin’s conjecture in the case of a Châtelet surface given as minimal proper smooth model of an affine variety given by

$$Y^2 + Z^2 = F(X, 1)$$

where $F \in \mathbb{Z}[x_1, x_2]$ is a degree 4 polynomial without repeated roots and whose factorisation into irreducibles over $\mathbb{Q}$ is of the form $F = L_1L_2Q$ with $L_1$ and $L_2$ two non proportional linear forms and $Q$ a quadratic form which is irreducible over $\mathbb{Q}[i]$. 

Mittwoch, 06.05.2015

ab 16:00 Uhr, Raum a410

Hauptgebäude der Leibniz Universität Hannover

Alle Interessierten sind herzlich eingeladen.

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